AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A printing system, comprising:

an inkjet printhead having plural portions each having an ink-ejecting nozzle;

plural heater elements each associated with one of said plural portions to pre-warm ink dispensed by the nozzle of said associated portion in response to a pre-warming signal; and

a controller configured to

analyze an upcoming print swath to determine which of said plural portions are required to eject ink in order to print the swath in accordance with a predefined selection criteria, and

~~generate~~ supply the pre-warming signal ~~for~~ to one or more heater elements of only the ~~based on a selection criteria for generating the pre-warming signal only when the nozzle of said associated~~ portions ~~is~~ required to eject ink ~~during an upcoming print~~ to print the swath in accordance with the predefined selection criteria.

2. (Original) The printing system of claim 1, wherein:

each of said plural portions is configured to dispense a different color of ink; and

the controller is configured to analyze which of said different colors of ink is required for the upcoming print swath.

3. (Original) The printing system of claim 1, wherein the selection criteria is based upon the type of media to receive ink dispensed from the printhead.

4. (Original) The printing system of claim 3, wherein:

one of said plural portions is configured to dispense ink of a first color having a first dye load;

another of said plural portions is configured to dispense ink of the first color having a second dye load less than said first dye load;

said controller is configured to interpret information to determine the type of media to receive ink dispensed from the printhead; and

when a first type of media is determined, said one of said plural portions is selected for printing and not said another of said plural portions.

5. (Original) The printing system of claim 4, wherein said first type of media comprises one of plain paper and transparency media.

6. (Currently amended) A printing system, comprising:

an inkjet printhead having plural portions each having an ink-ejecting nozzle;

plural heater elements each associated with one of said plural portions to pre-warm ink dispensed by the nozzle of said associated portion in response to a pre-warming signal; and

a controller configured to generate the pre-warming signal for one or more heater elements based on a selection criteria for generating the pre-warming signal only when the nozzle of said associated portion is required to eject ink during an upcoming print swath~~The printing system of claim 1~~, wherein the selection criteria is based upon a desired print quality of a resulting image formed by ink ejection of selected nozzles.

7. (Original) The printing system of claim 6, wherein:

a first selection provides a first print quality, and a second selection provides a second print quality less than said first print quality;

one of said plural portions is configured to dispense ink of a first color having a first dye load, and another of said plural portions is configured to dispense ink of the first color having a

second dye load less than said first dye load;

each portion comprises two groups of nozzles which dispense a single color of ink;

when printing under the first selection, ink is dispensed from both of said one and said another of said plural portions and from said two groups of nozzles thereof; and

when printing under the second selection, ink is dispensed from only one of said two groups of nozzles per portion of the printhead.

8-11. (Canceled)

12. (Currently amended) A printing system, comprising:

a printhead having plural portions each having an ink-ejecting nozzle located therein;

plural temperature sensors each associated with one of said plural portions to monitor the temperature thereof;

plural heating elements, each associated with one of said plural portions to apply heat thereto in response to a pre-warming signal; and

a controller configured to generate separate pre-warming signals for each of the plural heating elements in response to the plural temperature sensors to elevate the temperature of at least one of said plural portions to a pre-warming temperature~~The printing system of claim 8~~, wherein:

the controller is configured to analyze which plural portions are required to eject ink during an upcoming print swath;

the controller is configured to continue to generate pre-warming signals after printing of said upcoming print swath has begun; and

after ink ejection from one of said plural portions is not required to complete said upcoming print swath, the controller is configured to cease to generate a pre-warming signal therefore.

13. (Canceled)

14. (Currently amended) A method of pre-warming a multi-color inkjet printhead having plural portions dispensing ink, ~~The method of claim 13, further~~ comprising:

analyzing an upcoming print swath;

determining from said analyzing which of said plural portions are a dispensing portion required to dispense ink, and which of said plural portions are a non-dispensing portion not required to dispense ink during printing of said upcoming print swath;

generating a pre-warming signal for said dispensing portion;

pre-warming said dispensing portion in response to the pre-warming signal; and

omitting generation of a pre-warming signal for said non-dispensing portion to produce no pre-warming thereof.

~~wherein said first plural portion to receive the pre-warming signal comprises the dispensing portion; and~~

~~wherein said second portion to receive no pre-warming signal comprises the non-dispensing portion.~~

15. (Currently amended) A method of pre-warming a multi-color inkjet printhead having plural portions dispensing ink, ~~The method of claim 13, further~~ comprising:

determining a type of media upon which an image is to be printed; and

in response to said determining, selecting which of said plural portions are a dispensing portion required to dispense ink, and which of said plural portions are a non-dispensing portion not required to dispense ink during printing upon said determined type of media;

generating a pre-warming signal for said dispensing portion;

pre-warming said dispensing portion in response to the pre-warming signal; and

omitting generation of a pre-warming signal for said non-dispensing portion to produce no pre-warming thereof.

~~supplying the pre-warming signal to dispensing portions; and~~

~~wherein said omitting comprises omitting generation of a pre-warming signal for the non-dispensing portions.~~

16. (Currently amended) The method of claim ~~13~~14, further comprising:

monitoring the temperature of ~~each~~ at least some of said plural portions; and

wherein said generating of said pre-warming signal and said omitting generation of a pre-warming signal are conducted in response to said monitoring.

17. (Currently amended) A method of pre-warming a multi-color inkjet printhead having plural portions dispensing ink, ~~The method of claim 13, further~~ comprising:

determining a print quality for printing an upcoming image;

in response to said determining, selecting which of said plural portions are a dispensing portion required to dispense ink, and which of said plural portions are a non-dispensing portion not required to dispense ink during printing of said upcoming image;

generating a pre-warming signal for said dispensing portion;

pre-warming said dispensing portion in response to the pre-warming signal; and

omitting generation of a pre-warming signal for said non-dispensing portion to produce no pre-warming thereof.

~~supplying the pre-warming signal to dispensing portions; and~~

~~wherein said omitting comprises omitting generation of a pre-warming signal for the non-dispensing portions.~~

18. (Currently amended) The method of claim ~~13~~14, further comprising:

beginning printing of a print swath; and

ceasing generation of the pre-warming signal upon said beginning.

19. (Currently amended) The method of claim ~~13~~14, further comprising:

printing a print swath from a beginning point to an ending point;

continuing generation of the pre-warming signal after printing from the beginning point;

monitoring printing temperature of each of said plural portions during said printing; and

ceasing to generate the pre-warming signal when the printing temperature exceeds a threshold temperature before printing to the ending point.

20. (Currently amended) A method of pre-warming a multi-color inkjet printhead having plural portions dispensing ink, including first and second portions, ~~The method of claim 13, further~~ comprising:

generating a pre-warming signal for said first portion;

pre-warming said first portion in response to the pre-warming signal;

omitting generation of a pre-warming signal for said second portion to produce no pre-warming thereof.

analyzing an upcoming print swath;

determining from said analyzing which of said plural portions are transitional portions required to dispense ink over an initial segment of said upcoming print swath, and not required to dispense ink over a final segment of said upcoming print swath; and

from said determining, continuing generation of the pre-warming signal for said transitional portions during printing of the initial segment and ceasing generation of the pre-warming signal during printing of the final segment.

21-23. (Canceled)

24. (Currently amended) A printing system, comprising:

~~The printing system of claim 21, further comprising:~~

means for ejecting ink from plural portions of an inkjet printhead;

means for heating each of said plural portions in response to a pre-warming signal;

means for determining a type of an upcoming media;

means for sorting which of said plural portions comprise printing portions and which of said plural portions comprise non-printing portions when printing upon said upcoming media type; and

means for generating the pre-warming signal for ~~means for delivering the pre-warming signal to~~ the printing portions; and

means for omitting generation of the pre-warming signal for the non-printing portions.

25. (Currently amended) A printing system, comprising:

~~The printing system of claim 21, further comprising:~~

means for ejecting ink from plural portions of an inkjet printhead;

means for heating each of said plural portions in response to a pre-warming signal;

means for determining a print quality of an upcoming image to be printed;

means for sorting which of said plural portions comprise printing portions and which of said plural portions comprise non-printing portions when printing said upcoming image with the determined print quality; and

means for generating the pre-warming signal for ~~means for delivering the pre-warming signal to~~ the printing portions; and

means for omitting generation of the pre-warming signal for the non-printing portions.

26. (Canceled)

27. (Currently amended) A printing system, comprising:

~~The printing system of claim 21, further comprising:~~

means for ejecting ink from plural portions of an inkjet printhead;

means for heating each of said plural portions in response to a pre-warming signal;

means for generating the pre-warming signal for one of said plural portions;

means for omitting generation of the pre-warming signal for another of said plural portions;

means for determining when said one of said plural portions is required to print during an initial segment of a print swath and is not required to print during a final segment of the print swath; and

means for ceasing generation of the pre-warming signal after printing said initial segment.

28-30. (Canceled)

31. (New) The printing system of claim 1, wherein the selection criteria is derived at least in part from a parameter specified by a user of the printing system, the parameter different from the print data.

32. (New) The printing system of claim 1, wherein the selection criteria comprises at least two selection criteria.

33. (New) The printing system of claim 1, wherein particular ones of the plural portions are configured to eject a particular color ink, and wherein the selection criteria specifies a subset of the particular plural portions to be used to print the swath.

34. (New) The printing system of claim 1, wherein the selection criteria specifies an event after which the controller stops supplying the pre-warming signal to the heater elements of the portions required to eject the ink to print the swath.

35. (New) The printing system of claim 1, wherein each plural portion has a plurality of ink-ejecting nozzles.

36. (New) The printing system of claim 35, wherein each plural portion defines a linear array of ink-ejecting nozzles.